



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,672	12/14/2001	Kiyotaka Nishikawa	C01123/70001	9573

23628 7590 07/12/2005

WOLF GREENFIELD & SACKS, PC  
FEDERAL RESERVE PLAZA  
600 ATLANTIC AVENUE  
BOSTON, MA 02210-2211

EXAMINER

SHIBUYA, MARK LANCE

ART UNIT PAPER NUMBER

1639

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/017,672

**Applicant(s)**

NISHIKAWA ET AL.

**Examiner**

Mark L. Shibuya

**Art Unit**

1639

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 11 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 9, 13 and 66-79 is/are pending in the application.
- 4a) Of the above claim(s) 9, 13 and 69-75 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 66-68 and 76-79 is/are rejected.
- 7) ☒ Claim(s) 69 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-4, 9, 13, 66-79 are pending. Claims 9, 13, 70-75 are withdrawn. Claim 69 is objected to. Claims 1-4, 66-68 and 76-79 are examined.

### ***Election/Restrictions***

2. Applicant's election without traverse of Group I, claim 1-4, 9 and 13, in the reply filed on 7/29/2004, is acknowledged. Applicant's election of the species of IGF-1 receptor, Tyrosine and  $n=5$ ,  $m=5$ , in the reply filed 3/11/2005, is acknowledged. Applicant states that claims 1-4 and 66-68 read on the elected species. Applicant, in the reply filed 3/11/2005, requested reconsideration of the species requirement for the amino acids Xaa. Upon further consideration the requirement for election of a species of Xaa is withdrawn. Claims 9, 13, 70-75 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

### ***Priority***

3. This application claims benefit of Provisional Application No. 60/255,586, filed 12/14/2000.

***Oath/Declaration***

4. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It was not executed in accordance with either 37 CFR 1.66 or 1.68.

It does not identify the city and either state or foreign country of residence of each inventor. The residence information may be provided on either on an application data sheet or supplemental oath or declaration.

Because the image file wrapper copy of the Oath or Declaration, entered 8/7/2002, is illegible in places, it is impossible to ascertain the execution and the residence and citizenship for all inventors. See below request under Specification.

***Specification***

5. The examiner respectfully requests that the applicant supply additional copies of the paper Sequence Identifier Listing (entered 8/7/2002, 4/11/2003, 4/15/2002) and especially the Oath or Declaration (entered 8/7/2002), because the images of said Sequence Listing in the Image File Wrapper and Oath or Declaration are faint and difficult to read completely. This request for documents reiterates and expands upon the Notice Under 37 CFR 1.251, mailed 4/14/2005, requesting all documents dated 8/7/02. The applicant's assistance in maintaining a legible and accurate record is greatly appreciated.

***Claim Objections***

6. Claim 69 is objected to because of the following informalities: Depending from a canceled claim. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claims 1-4, 66-68 and 76-79 are rejected under 35 U.S.C. 102(a) as being anticipated by Nishikawa et al., Molecular Cell, Vol. 6, pages 969-974, (Oct. 2000).

The claims are drawn to a method for determining an amino acid sequence binding motif for a phosphorylation site of a kinase, comprising: a) contacting the kinase with a peptide library, wherein each peptide comprises a single non-degenerate phosphorylatable amino acid in a fixed position of the peptide and wherein each peptide comprises one or more degenerate amino acids, under conditions which allow for binding of a peptide by the kinase at the phosphorylation site of the kinase; b) allowing the kinase to bind peptides of the peptide library having a binding site for the kinase phosphorylation site to form kinase-peptide complexes; c) isolating the kinase-peptide complexes from the unbound peptides; d) releasing the peptides from the kinase-peptide complexes; e) isolating the peptides previously bound to the kinase in kinase-

Art Unit: 1639

peptide complexes; f) determining the amino acid sequences of the peptides isolated in (e); and g) determining an amino acid sequence motif for a binding site of the kinase based upon the relative abundance of different amino acid residues at each degenerate position within the peptides.

Nishikawa et al., throughout the publication and abstract, and especially at p. 696, para 4, p. 971, Figure 1 and Table 1, teach a method for determining an amino acid sequence binding motif for a phosphorylation site of a kinase that is ZAP-70, comprising: a) contacting the kinase with a soluble peptide library (as in claim 3) containing the sequence Met-Ala-X-X-X-X-Tyr-X-X-X-X-Ala-Lys-Lys-Lys, where X indicates all amino acids except Trp, Cys, or Tyr, and which reads upon a library wherein each peptide comprises a single non-degenerate phosphorylatable amino acid in a fixed position of the peptide, and wherein the non-degenerate amino acid is tyrosine (as in claim 4) and wherein each peptide comprises one or more degenerate amino acids, under conditions which allow for binding of a peptide by the kinase at the phosphorylation site of the kinase; b) allowing the kinase to bind peptides of the peptide library having a binding site for the kinase phosphorylation site to form kinase-peptide complexes; c) isolating the kinase-peptide complexes from the unbound peptides bound to the kinase by washing (p. 969, para 4, p. 970, Table 1; as in claim 77), which have been immobilized on glutathione beads (as in claim 76); d) releasing the peptides from the kinase-peptide complexes by elution (as in claim 78) with 30% acetic acid (as in claim 79); e) isolating the peptides previously bound to the kinase in kinase-peptide complexes; f) determining the amino acid sequences of the peptides isolated in (e); and

Art Unit: 1639

g) determining an amino acid sequence motif for a binding site of the kinase based upon the relative abundance of different amino acid residues at each degenerate position within the peptides (at p. 970, para 2 and Table 2).

**Conclusion**

8. Claim 69 is objected to. Claims 1-4, 66-68 and 76-79 are rejected.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark L. Shibuya whose telephone number is (571) 272-0806. The examiner can normally be reached on M-F, 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on (571) 272-0811. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mark L. Shibuya  
Examiner  
Art Unit 1639

ms